

ESKRIDGE (J. T.)

RETROANTEROGRADE AMNESIA,
WITH REPORT OF TWO
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DENVER, COLO.

Reprint from
THE ALIENIST AND NEUROLOGIST,
St. Louis, July, 1892.



Retroanterograde Amnesia, with Report of Two Cases.*

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AMNESIA in all its manifestations forms an interesting subject for study and discussion. By a careful analysis of the diseases of memory we can frequently learn more of mind than we are able to do by studying it untrammelled by disease. I desire to report two cases of retroanterograde amnesia. The first is uncomplicated by any legal questions and its genuineness is undoubted. It is also comparatively short in duration, but a careful study of its chief features will aid us in arriving at conclusions relative to the law that probably governs the loss and restoration of memory under similar conditions. The second implies a defect of memory extending over a period of more than twenty years, in a man whose general health and business capacity were good previous to a brain disturbance which apparently arose from financial losses, business worry, intense anxiety and heat exhaustion. The suit in this case involves the sum of one or two hundred thousand dollars. It is the first, so far as my information goes, in which retroanterograde amnesia has been a cause for litigation. The length of time over which the amnesia extends and the numerous complicating circumstances, together with some conflicting testimony and the evident motive for feigning in this case, require a thorough and exhaustive study of the subject's principal actions over the entire period of alleged amnesia. The second case, then, both on account

* Read at the meeting of the Colorado State Medical Society, held at Denver, June 21, 22, 23, 1892.



of the numerous difficulties encountered in a careful study of it and its great importance from a medico-legal stand-point, will form the basis of this paper.

After giving a short report of Case I., I shall mention some of the legal difficulties that surround Case II., then will follow a rather extended history of the latter, a brief study of some phases of a few forms of amnesia and a review of Case II., with conclusions.

I wish to relieve the apprehensive tired minds of the members of the society to-night, by informing you that I intend to read only a brief synopsis of my paper.

CASE I.—Mrs. R. P., æt. 40, Germany, married, of a nervous temperament, mother of one child, claims to have always enjoyed good health up to July 15, 1891, when she was knocked down and rendered unconscious by a horse running against her. After the accident she remained in an unconscious and stuporous condition for two weeks, and for a period of four weeks longer she seemed queer or dazed. In the latter part of the year 1891, when I first saw her, she stated that the first thing that she could remember after the accident was on the last day of August (forty-five days after the injury) when she saw her husband and son, but also recalls the fact, which her husband substantiates, that she did not recognize who they were but regarded them as strangers. She protested against her husband sharing the same bed with her, saying that it was an outrage that she should be compelled to sleep with a stranger. By the middle of September, or two months after the accident, her mind had considerably brightened and she seemed to appreciate her surroundings.

It is now found that her memory is a total blank for everything that occurred from June 20th to the time of the injury, July 15th, a period of twenty-five days preceding the accident, although during this time she exhibited as great a degree of intelligence, and possessed as good memory as at any former period of her life. Neither does she remember anything from the time of the accident, July 15th, to August 31st, a period of forty-six days. We have here a condition of total amnesia of the retroanterograde type, extending over a period of seventy-one days, the former (the retrograde)

including twenty-five days of this time, and the latter (the anterograde) forty-six days of it.*

I am informed that the law of Colorado, or the statute of limitation, is, that if a person holds a piece of real estate as his own and pays taxes on it for a period of five years, and his title to the property should not be contested during this time, he then becomes the real owner of the property by virtue of the fact that he held uncontested possession of it for a period of five years, and complied with the law of the State in paying the taxes on it during this time.

The plaintiff, whose history forms Case II., brings suit to recover land that another had held uncontested possession of and paid the taxes on for a period of twenty-three years.

Of the two principal questions that have arisen in this case, one is purely legal, Was the land held in trust by I. for A.? and the second is purely medical, Was the mind of A. so impaired by reason of his amnesic condition, during these twenty-three years that he could not recall the transaction regarding the land?

Of the purely legal aspect of the case I have nothing to say. That A. is not an impostor is quite certain.

The history of this interesting case is as follows:

Andy M. A., æt. 61 years, born in Pennsylvania, cattleman by occupation, came to Colorado about thirty years ago.

Family History.—His father died, aged about fifty, after an obscure illness, lasting only twelve hours. As he retained consciousness to the last, was not paralyzed and suffered no pain, we can probably exclude any brain trouble. There is no suspicion of nervous or mental disease in any member of his family.

Personal History.—During childhood, with the exception of suffering from some of the acute exanthemata

* As this case presents many interesting features besides the amnesia here recorded, I intend to publish it in detail as soon as convenient.

which left no appreciable sequelæ, his health was excellent. At his twenty-second year, or in 1853, he was ill from typhoid fever. His recovery from this seems to have been complete, and he remained well until 1863, when he suffered from a severe attack of small-pox, which left him severely pitted, but after convalescence, his health was excellent. He was strong and rugged, weight about two hundred and thirty-five pounds, and with apparent impunity he endured many hardships in his life on the plains. He has never been accustomed to more than a very occasional and sparing use of alcohol, and he denies syphilis or venereal excesses. His occupation was trading in cattle, and by 1865 or 1866 he had accumulated a competency of more than one hundred thousand dollars. In 1866 he sold cattle to various parties in Denver, and among these was one Eastman, who bought two thousand dollars' worth. During this year he secured a contract from the U. S. Government to deliver five thousand beef cattle to the Government post of the Indian Reservation. These cattle were to be delivered in the summer of 1867, and the U. S. troops were to protect the cattle and men from Indian depredation. In January, 1867, when A. demanded pay of Eastman for the cattle sold him in 1866, the latter was without cattle or money, but deeded, at the request of A., one hundred and sixty acres of land, situated several miles from Denver, to a third party in trust for A. The land was then estimated to be worth about five hundred dollars. It is now estimated to be worth from \$100,000 to \$200,000. The third party, the confidential and trusted friend of A., was to hold the land in trust for the latter until it became of sufficient value to pay his claim against Eastman, when he was to sell it and pay A. The latter apparently never told his wife of the transaction, and the only allusion he made to her about the land was to inform her on the same day of the execution of the deed in trust that he had bought her a farm on the sand hills.

In the spring of 1867, A. went to Texas, and bought between five and six thousand beef cattle, out of which he intended to supply his Government contract. These cattle were valued at one hundred and fifty thousand dollars. In June of the same year, while these were being driven north from Texas, the Indians attacked and captured the entire herd. Mr. A. suddenly found himself bereft of all his property, and owing money which he had no means to pay. The next three years, from 1867 to 1870, he spent in trying to get the Government to reimburse him for his losses. This was attended with a great deal of labor, hardship and anxiety. He was compelled to make repeated and prolonged visits to the Indian Country, and secure from the families and tribes in council their acknowledgment of having committed the depredation. He also spent much time in Washington, in urging senators and representatives to press his claim, and finally several months were consumed by him in visiting the various departments to see that his claim was not allowed to be pigeon-holed.

In 1869, he invented and had patented a lock which was adopted by some of the railroads for their freight cars.

While engaged in urging his claim, on a hot spring day of 1870, he was apparently exhausted by fatigue and exposure to the sun's rays, fell on the street, and was taken home in an unconscious condition. He soon recovered and again resumed the pursuit of his Government claim. Shortly after this attack, in the latter part of the spring of 1870, he obtained from the Government seventy-three thousand dollars. With this he paid his debts, and had about thirty thousand dollars left. For a few weeks after his first fall on the street, he complained of a great deal of headache and exhaustion, and often remarked that he must be getting softening of the brain.

Shortly after securing the money from the Government, during the summer of 1870, while walking along the streets of Washington in the sun, to use his own words:

"I felt a very tired sensation as though I was carrying a heavy load, and started to go home, got as far as the gate of the Smithsonian Institute, and the rest is a blank for a long time." He was taken home in a stupid or semi-conscious condition. He was confined to his bed a number of weeks, seemed dazed and was delirious part of the time. He complained a great deal of head pain and disorder of the stomach. After a few weeks he was able to walk, but he seemed in a semi-demented condition. He never referred to business, and appeared to take no interest in anything except his own sufferings. He had lost nearly all memory of recent events.

In August, 1870, he was removed to Newark, N. J., where he remained until the summer of 1871. During the first week there he was confined to bed, and complained much of headache. The next three weeks he was up most of the day and walked around considerably, but still complained of distress in his head and seemed dazed. At the end of his first month's stay in Newark, he fell on the street, was taken home in an unconscious condition, and remained in this state for several hours. Following this attack he was confined to bed about three months, and became greatly emaciated. During this time he was paretic on the left side on several occasions for days at a time. His head and stomach were complained of bitterly. His mind seemed worse, and he was, from the description of his condition, partially demented. He was depressed, apprehensive, sleepless and, at times, the subject of delusions. He had great fear of being left alone, and someone had to sit beside his bed at night and hold one of his hands before he could be gotten to sleep. In the spring of 1871, he began to improve some in health and was able to take walks, but it was observed that when he would go on the streets, he would walk in the middle of the streets. When asked why he did this, he would say that he was afraid the houses would fall on him if he got close to them. At this time his memory for recent events was very poor. He could not recollect what had

been told him a few days or a few hours before, and his conversation was generally on the incidents of his early life, and especially about his encounter with the Indians. It appears from the testimony that during his entire sojourn in Newark, he was nervous, hypochondriacal, melancholiac and child-like.

In the fall of 1871 he was taken to Sacramento, California. His weight then was ninety-five pounds. His weight before the beginning of his troubles was two hundred and forty pounds. He improved some in health soon after reaching California, but still remained feeble both in mind and body. He remained in California from 1871 till 1880. During this time he was trying to do some business in connection with the manufacture of a lock that he had invented in 1869, but all his business ventures were failures. He was somewhat visionary in regard to the success of his lock. Soon after reaching California he again fell on the street and had to be taken home. After he had been in California some years, he awoke an old friend one night by making such a noise that he could have been heard several blocks distant. His friend took him into his house, and sat up with him all night. It was found in the morning that A. had forgotten everything that had occurred the night before. During his stay in California he was observed by all to be eccentric, and by his friends and those who knew him best, to be unbusiness-like, and to have an exceedingly poor memory. His conversation, when he would talk, was about his lock, his illness, the incidents of his early life and his Indian stories. Not one of the many witnesses in California, both for the plaintiff and defendant, ever heard him refer to the land transaction now in dispute. On one occasion, in 1875 or 1876, he drove from his house to a hotel in San Francisco, where he transacted some business and walked back home, a distance of a mile or more, and when asked where he had left his horse and buggy he was unable to tell. At times he shut himself up in his room, and told people that he did it for fear he

might kill some of his children, especially the one to whom he was greatly attached. In his business he would give orders one day and the next day declare that he had never given such orders. With all his peculiarity and lack of memory, he showed a considerable amount of perseverance in connection with his lock business, was at times able to drive a good bargain and talked intelligently and well on the subjects on which he was accustomed to converse when in a talkative mood. It seems, however, that he was disinclined to talk much to anyone, except to those who had his confidence, and only to them on his pet subjects.

After carefully studying several hundred pages of sworn testimony taken in California, of numerous witnesses who had known him quite intimately for years, I fail to find a single intimation that he ever discussed the topics of the day.

In 1880 A. returned to Denver. He was then in a feeble condition physically, his memory was weak and his judgment was untrustworthy. During the time he remained in the city, which was only two weeks, he spat blood once or twice. Whether the blood was from the stomach or lungs it is impossible to determine at this time. He remained in Colorado several months, was aided by friends in starting in several petty business enterprises, but he made failures of all, as he appeared totally incapable systematically to attend to anything.

In the latter part of 1880, he went to Albuquerque, N. M., soon began to improve in health and tried various means to gain support for himself and family. A., with a partner, secured a contract to supply a railroad with ties, but soon abandoned the enterprise and seemed disinclined to talk about it. The next year he secured another contract of the same nature and had, associated with him, a friend. A.'s business was principally to look after supplies for the camp, but when he went to town, a distance of 130 miles, with written orders for supplies, some he had filled and others he forgot. It was found impracticable to

depend upon him to attend to any business. It was noticed that he would wander in his conversation and quickly forget recent events.

On one day he told a friend the particulars of his father's death three times. Even after he had been in New Mexico some years, he would, when the state of his health was inquired into, reply that he never felt better, but in a few minutes afterwards he would complain of very bad health, his stomach and his head still being the principal subjects of complaint.

In 1883 he testified quite clearly concerning a loan made by him in 1866, to leaving the note in the hands of a third party for collection in 1867, to the contents of two or three letters written by him in 1868 and 1869 concerning the collection of the money, to the contents of the letters in answer to those he wrote and to particulars that occurred in 1880, when he met the man to whom he had lent the money in 1866 and found that he had paid the third party, and to the circumstance of meeting the third party in 1881. It must be remembered that in regard to this transaction that A.'s wife was fully conversant with all the facts and urging him to proceed in a suit against the party who had defrauded him out of the amount of the note. The letters written in 1868 and 1869 concerning the payment of this note and the appointment of a party to collect it, were known to her, and they talked over the matter after their losses in 1867, when they were sorely pressed for the necessaries of life. The occurrences in connection with A. meeting the parties in 1880 and 1881 were well known to her, and they had frequently discussed them.

Mr. A.'s health, both mental and physical, continued gradually to improve during his stay in New Mexico, but at its best, he was easily exhausted, soon discouraged, and his memory was not to be depended upon. He was in this condition in 1886 or 1887, when, while walking along the streets of Albuquerque, he heard a man selling goods at auction, and the voice seemed so familiar that

he was induced to go into the store. The man's face appeared familiar, but he could not recall his name or the circumstances under which he had known him. This person was Eastman who had deeded the tract of land in Denver in trust to a third party for A. Eastman had to detail the particulars of past events before they could be remembered by A., and the latter could recall the land transaction only after he had been informed by Eastman of the one hundred cows by which he had come into possession of the land. Mrs. A. was given by Eastman, on this occasion, an account of his deeding the land in trust to a third party for A. This seems to have been the first information she ever received of this particular transaction. A. seemed to think that he owned the land, but was discouraged at the thought of exerting himself to gain actual possession of it, and told Eastman that he could do nothing with it unless his mind became better. Eastman and A. came to Denver, and the former located the land for the latter. Inquiry of friends in Denver and consultation of old records revealed other transactions that had been forgotten, but A. said he was sick and unequal to the task, and returned home to Albuquerque. After this he was indifferent about the matter, and again became interested in his lock which he had invented in 1869. It was only by the efforts of Mrs. A., who mortgaged her homestead to raise money, that A. was induced to come to Denver, in 1890, and begin suit.

A great deal of time was spent in gathering testimony from persons who had known A. before his losses, in 1867, and during his illness in Washington, Newark, California and New Mexico, so that the case was not set for a hearing till May the 24th, 1892.

On May 12th, 1892, I was requested by the attorneys for the plaintiff to investigate the mental condition of A., from 1867 to the present time. After carefully studying the several hundred pages of sworn testimony by witnesses for the plaintiff and defendants, concerning A.'s mental and physical condition, during these years, I became convinced

that he was, during the greater portion of this time, if not during the entire period, mentally unsound, but that it was not dementia, as his attorneys thought, although during a number of years, he was partially demented. It seemed to me a condition of retroanterograde amnesia—a name first applied to this peculiar mental state by Charcot, in 1892, in his description of a case that came under his observation (*Rev. de Med.*, March, 1892).

After inquiring into A.'s family history, and into his personal history up to 1866, I requested him to write, for me, most of the important occurrences of his life from 1865 to 1890, giving the events he could now remember assisted by written records or by his family and friends in recalling events to his mind. On his giving me these recollections, I asked him to write, for me, all important events of his life from 1865 to 1890, in the recollection of which he had been unassisted by any of the above means. This last request confused and puzzled him, and it was several days before I could get him to submit anything relating to the subject. He said his mind was unequal to the task and he would have to give it up. Finally he brought me his second paper, containing his effort to separate his unassisted from his assisted recollections.

Although the first paper is rather long and tedious reading and the second contains in an abbreviated form the main facts of the first, yet they are both so important, in a study of his memory, that I will submit them in full as he wrote them:

Paper No. 1.—"Lived at Fort Union, N. M., 1865. My eldest boy was born ——. Remember John Iliff was with me there, 1865. (I) was furnishing cattle to the Government, 1865. Sold Williams, Geo. Brown, Cole and Roberts 1,500 beef steers delivered in Denver, 1865. Took a Government contract to furnish 5,000 beef steers for Indians, at Fort Sumner, 1866, to be delivered in Spring of 1867. Went to Texas and bought a large herd of cattle in 1866. Took this herd to Denver in the fall for sale. Iliff assisted me collecting and keeping charge of my money. Moved my

family from Fort Union, N. M., to Denver, summer, 1866. Left Denver in the last of Jan., 1867, to go to Texas to buy cattle to fill my contract in New Mexico. Took my family with me in the coach. Left them at my brother's in Illinois. Went on to Texas, bought large herds of cattle in March, April and May of 1867. Started the cattle on their road to New Mexico in charge of my men. Turned back through Texas to Illinois, got my family and left for Denver. When near Denver, at O'Fallen's Bluff, the Indians attacked the coach we were in. Had a hard fight for our lives: lost but one man. Came on into Denver and there for the first time learned that the Indians had captured all my cattle and outfit on the Pecos and Concho rivers. This more than ruined me financially—left me in debt. I left my family, went down from Denver into New Mexico and got some money—several thousand dollars I had at Union and Santa Fe. Moved my family to Council Grove, Kansas. This all occurred in the spring and summer of '67. I made out a claim against the Government for the loss of my stock by the Indians in the fall of '67 and traveled down through the Indian country, suffering many hardships that none but a hearty, strong man, could endure, trying to locate the Indians that commit the depredation on me. I found the Indians and many of my stock (horses and cattle) with them, and the chiefs of the different tribes acknowledged the depredation. With these proofs I went to Washington in the fall and winter of '67 and presented the proofs of my losses to the Government, only to be told by the Secretary of the Interior that he could not allow my claim until I could get all the wild Comanche Indians together, men, women and children, and have them acknowledge in open council that they commit the depredation. I went home to my family all broken up but not whipped. It would take me too long to tell you how I accomplished this task and of the suffering and trouble it cost me. I was two years—'68 and '69, working at it—but I done it to the satisfaction of the Government and the Government allowed my claim—paid

me \$73,000, after six months, in 1870, of hard work in Congress and the departments, which was the worst of all work for me, as I was used to live out in the open air. I paid all my debts and had moved my family the year before from Kansas and lived in South Washington. One day I felt a very tired sensation, as though I was carrying a heavy load, and started to go home—got as far as the gate of the Smithsonian Institute, and the rest is a blank for a long time. I remember of being in California, but not the year. I remember of being in Sacramento and of doing some work there. It seems like a dream. I remember San Francisco better. My oldest boy died there with scarlet fever, and I remember what terrible sufferings I endured from stomach trouble and want of rest and sleep. There would be some days or parts of days while there that I would feel better than others, so that at times I could do some little business. We were living in San Fran, and I remember of us living in Alameda, across the bay from San Francisco; of living in Humboldt Co., Cal.; of having something to do with a lock factory in San Francisco; but such a sufferer from my diseased body and mind, can remember but little else than the misery I endured. In 1880 I remember of leaving California to go back to N. M.; that a man by the name of Stager came with me to help me on the road; that we stopped at Mr. Cole's, in Denver, a week or two, as I was very low and weak. Went to see Dr. Wilson, as there was times while there that my mouth would fill with blood. Where it came from can't say. It seemed to come from my throat and stomach. Got into N. M. in the fall of 1880.

"Commenced to recover at once but very slowly, and lived in Albuquerque, gaining a little each year until 1886, when I felt much better and was able to manage business matters.* Since that date I can recall and remember things that have happened previous to my sickness in Washington quite clearly, when something or

* Wife states that he has been unable properly to manage any business, from 1870 till the present.

someone recalled to my mind. About that time I met a man in Albuquerque by the name of Eastman. When I first saw him I could not recall his name, but after talking with him and speaking of the past events, I remembered him well; he was in the employ of Lincoln & Stricker, at the Elephant Corral, in Denver, in the fall of 1866, and assisted in the sale of the large herd of cattle I brought to Denver at that time. He asked me what I had done with the land I bought of him in Denver? Not until he spoke of the hundred cows I gave him for it, did the whole circumstance come into my mind, and then I remembered what I had done with it, that I had left it with John W. Iliff, to be held in trust for me. I did not take any steps to try to reclaim my land until 1890, for the reason I had no means to defray the expenses. I came up to Denver in '90, and there learned by talking to my acquaintances, and the records and old-time friends of the past events, that I had not only left the land with Iliff, but that I had left with him \$12,000 worth of other property, that I had money coming to me from Dick Outan, Zan Hicklan and Maxwell, amounting to more than \$25,000. All this I lost, for all recollection of it went out of my memory during my sickness—it was surely gone from my mind, or there would have been someone to have made an effort to get something for me during all these years of suffering and want. You might ask where was my wife? I will tell you that I was at home but a very small portion of my time, so little, that my children scarcely knew me, and in those days a man's word was as good as his note—we took no obligations in writing.

"A. M. ADAMS."

Paper No. 2.—"In trying to separate what I can remember of past events from what my family know of the last twenty-five years can't be done. Of course all the events of my life have been talked over by my family in my presence, since I was taken sick and after I

commenced to recover. It seems impossible for me to tell what portion of my present recollections I received from them. I can recollect incidents of my early life, and of coming to Colorado and living among the Indians before I was married or taken sick in Washington, and I am certain that no one can make me believe that things did occur that did not occur before I was taken sick. Maybe you don't understand me, I mean to say when I am told of an occurrence that happened before I was taken sick and had gone out of my recollection, I know whether it is true or not, one thing I do know, I have no recollection of occurrences that happened from the time I was taken sick in Washington until I found myself in Sacramento, California. There is something wrong somewhere, and I can't get it right, it does seem to me that I am or have to depend a good deal on my family for the events and occurrences of my life, since I lost all my property by the Indians in the spring of 1867. My family did not know anything of the Iliff affair, and it went out of my recollection; they did not know that Maxwell owed me a large amount of money, and it went out of my recollection; they did not know that Outan owed me for a large herd of cattle, and it went out of my recollection; that Hickland owed me for the same, and it went out of my recollection; or that I had given Lyman Cole a herd of cows, and knew nothing of it until he told me last year (1891). These circumstances have been brought to my memory by friends and acquaintances in the last three years. If I had known these facts before it was too late to profit by it, it would surely kept me out of want and misery all these years, but my family did not know it, but when called to my recollection by others, I can remember them well, and know that it is true, that each circumstance can be proven. I believe the facts in the case to be, I was not crazy or drunk all those years, but that my memory was gone, and that I have to depend on my family for what I know of what transpired during the

years from 1867 to 1887. I had no idea you would ask me the questions you have, and I have done the best I can to answer you and given you my reasons for thinking as I do and hope this will be what you want.

"A. M. ADAMS, Denver, May 15, 1892."

Mr. A. is a man with a large frame, and now weighs from one hundred and eighty to two hundred pounds. He registers on the dynamometer, R. 180; L. 182. There is no ataxia, paresis, paralysis or loss of any form of sensation. The reflexes, deep and superficial, are in about a normal condition. On the day of his first visit to me, May 13, 1892, his tongue was in a fair condition, his breath was free from an offensive odor, he said he had no pain and his mind seemed to act fairly well. I wished to test the effect of mental exertion on him, and, after questioning him twenty or thirty minutes, I told him to go home, and write out the important events that occurred in his life between the years 1865 and 1890 of which he had any memory at present, no matter if his memory of these events had been assisted by others. I insisted that I must have these data within twenty-four hours. This was about 9 A. M. At about the same hour the next morning, he brought me paper No. 1, looking greatly fatigued, and complaining of his stomach. He said the task had been too much for him, and before he got through with what he wrote, he was very tired and found it difficult to think. I told him that he must try to do what I asked him, as my connection with the case would depend upon whether he did his part honestly and faithfully. I then requested him to write, for me, by the next morning, what important events of his life from 1865 to 1890 that he could remember of himself, and for these recollections he must have had no assistance of any persons or records from the time he was taken sick up to the present. Promptly at 9 o'clock the next morning, he presented himself at my office, but this time with one of his attorneys, Judge Stuart. Mr. A. looked worried and haggard, and said

that he could not write what I wanted and would have to give it up. I told him that he must do it, and gave him two days in which to perform his task. At the appointed time he appeared with paper No. 2. On this occasion he really looked sick. He had a haggard, careworn expression, his conjunctivæ were yellowish, his tongue was heavily coated, his breath had a sour and an offensive odor, he complained of pain in his stomach, and of a confused, dull, heavy sensation in his head. He appeared despondent, and asked me to examine his stomach to see if he was suffering from cancer of that organ. I, again, began to question him on what he could remember from 1867 up to the present, and he answered me fairly well for a few minutes, but soon he commenced to get the dates mixed, and finally he said he could not seem to think clearly. I pressed him for a while, but I only succeeded in confusing him. I had requested Judge Stuart to have my friend, Dr. Pershing, associated with me in the case, and I requested Mr. A. to call on him that morning and let him make any necessary examination and ask what questions he saw proper. At first he said he was too sick to go, but as he had to go to New Mexico that night, he said he would go and get through with the physicians. I learned afterwards that he did not call on Dr. Pershing that day, and it was only by chance that the doctor got an opportunity to examine him before his case was heard by the Court.

We were both agreed that A. suffered from amnesia, extending backward some three or four years from the time of his severe illness in Washington, and forward from it up to 1887 or 1890, in fact, it appears to us that his consciousness is at present somewhat restricted, owing to a condition of partial amnesia that may at present exist. This view is substantiated by the fact that he had no knowledge, in 1891, of the disposition of a herd of cattle in 1867 until he was told of it. How many transactions he does not remember probably will never be known.

Before reviewing A.'s case and giving the reasons for the conclusions arrived at from a study of it, it seems to me that I may, with profit, devote a short space to the consideration of consciousness and its defect in amnesia. When a person is in a condition of complete consciousness he registers the impressions to which his attention is directed at the time and correlates these impressions with a summary of past recollections (see Spitzka on Insanity). It is not sufficient for one to remember a summary of past recollections and register the impressions of the present, to which his attention at the time is directed, but he must harmonize or correlate the present with the past. A failure to do this gives rise to a condition that has been termed double consciousness (present and past), a state in which the present *ego* may hold a discussion with the past *ego*, but of this interesting condition we have nothing to do in this paper. Whether there is an inability to correlate a summary of past impressions with those consciously registered at the present, whether there is a lack of power to remember past impressions in sufficient number and intensity to form an experience upon which to base a sound conclusion, whether there is simply a failure on the part of the brain to register present impressions in sufficient number and intensity to constitute a healthy present *ego*, whether both the present and past *ego* are pathologically feeble, or whether one or both selves are nearly, if not completely, destroyed, consciousness is defective, and in proportion to that defect is the mind impaired. We may go further and affirm that whoever has had his memory disturbed by a period of complete or partial amnesia, unless an entire restoration of memory for that period take place, can never have a complete healthy consciousness. There will always be a gap in it, and for failure in subsequent years to comply with the law in relation to contracts or agreements made during that period the individual should not be held accountable.

In studying the memory of any individual we should

bear in mind the fact that some persons are naturally, or from force of habit, forgetful and absent-minded. A degree of absent-mindedness or forgetfulness, natural with some, suddenly developed in a person who had always before shown a good memory for such things, and had exhibited a watchfulness and appreciation of passing events, would be a sign of disease.

"Memory," according to Mercier, "is the recurrence of a mental state that had occurred before." Ribôt says the process implies conservation and localization in the past. It is probable that memory is divisible into as many forms as there are classes of things to be remembered. We know that memory for different objects is unequally developed in various individuals, and this in many persons at first, at least, seems independent of the attention given to developing the memory in certain directions. Some persons have little difficulty in remembering forms, as the features of individuals; some can most easily recall a person by the sound of his voice, and in some, visual memory is most acutely developed, as seen in the artist. If we accept this view of the divisibility of memory, we shall have little difficulty in understanding the various partial amnesias that sometimes occur.

Amnesia may be partial, as when the loss of memory is limited to certain objects or classes of objects, leaving the entire remainder of the storehouse of memory uninvaded, or it may be complete, extending over a greater or less period of one's life, and causing complete disseverance of mental integrity. It will be impossible without extending this paper to undue length to consider the different forms of amnesia. I shall be content to consider the most salient features of the best studied forms of the diseases of memory, and endeavor, if possible, to arrive at certain conclusions that may aid in diagnosing real from feigned amnesia. For this purpose I shall limit my remarks in this paper to the consideration of certain of the complete amnesias, leaving the partial

for a time when a case may occur requiring a minuter study of them.

The best known of all forms of amnesia is the progressive variety, usually known as dementia. In this variety there are certain laws which are apparently constant, both for the destruction of memory and its restoration, when recovery takes place. In this form of amnesia mental impressions are obscured or obliterated in an inverse order to which they were registered in the brain. First, the memory is weakened for recent events but soon the affection extends to ideas, then to sentiments and affections, and, finally, to actions (Griesinger). As destruction goes on, there is complete amnesia for recent events, and as feebleness of memory increases, period after period of the life of the individual, extending in this inverse order, is dropped from the memory until only the incidents of youth or childhood are retained. At this stage, as all higher cerebration is stopped, and the registrations of the complexities of life for the time, at least, are absent from the consciousness, it is not surprising that there should be exhibited by one so demented a detailed memory for the trivial events of early life. When this condition is recovered from, as it has been in a few isolated cases, memory is restored in an inverse order to which it was lost. The last things forgotten are gradually revived and the process may go on until complete restoration takes place, the first thing forgotten in this process of dissolution, all things being equal, being the last thing to return to the memory in the process of restoration.

If, then, we bear in mind that the things that make the most impression upon the mind at the time of their occurrence are remembered with greater tenacity than those that left little impression, we have in the law of destruction and restoration of memory in progressive amnesia an absolute guide to enable us to determine whether the alleged loss of memory is real or feigned. We must, under such conditions, however, carefully

study the character and temperament of the individual and the nature of the circumstances under which certain things took place. What may most impress the mind of one individual may have but little effect upon that of another, and circumstances may have been such as to impress most indelibly a trivial occurrence upon the mind. Another warning is necessary here. We must be careful to separate what is remembered of one's own powers of recollection from that which has been recalled to it by persons, records and circumstances. There can be no absolute law to govern the return of memory when it is assisted by these means. Under these circumstances that which was first forgotten may be the first to be remembered if some one recalls it to the mind of the individual.

Amnesia, suddenly developed from brain disturbance, may be partial or complete. In some instances the amnesia assumes the retrograde type, and extends backwards over a period of days, weeks, months or years prior to the brain trouble which gave rise to the loss of memory. In other instances the amnesia takes the anterograde type and extends over a variable period following the brain injury. The most common type of the amnesic period, developing suddenly after brain injury, is the retroanterograde variety, in which the amnesia extends backwards and forwards over variable periods preceding and following brain disturbance.

Concerning the manner in which memory for these periods is sometimes regained, Ribot (*"Diseases of Memory,"* page 80) says:

Sometimes memory returns of itself and suddenly; sometimes slowly and with assistance; sometimes the loss is absolute, and complete re-education is necessary.

Of the purely retrograde variety of amnesia, a case given by Ribot, but copied from the Letters of Charles Villiers and G. Cuvier (Ribot, *"Diseases of Memory,"* page 80), is typical:

A young woman, married to a man whom she loved passionately, was seized during confinement with prolonged syncope, at the end of which she lost all recollection of events that had occurred since her marriage, inclusive of that ceremony. She remembered very clearly the rest of her life up to that point. At first she pushed her husband and child from her with evident alarm. She has never recovered recollection of this period of her life, nor of any of the impressions received during that time. Her parents and friends have convinced her that she is married and has a son. She believes their testimony, because she would rather think that she has lost a year of her life than that all her associates are impostors. But conviction and consciousness are not united. She looks upon her husband and child without being able to realize how she gained the one and gave birth to the other.

The most curious case of purely retrograde amnesia is one reported by Brown-Séquard (Ribot, page 96). The person after an attack of apoplexy, lost all recollection of five years of his life. These five years, which comprised the period of his marriage, ended just six months before the date of the attack.

Carpenter, in his work on "Mental Physiology," relates the following case, which is an example of temporary amnesia from cerebral shock, extending backwards from the time of the accident:

A gentleman was driving his wife and child in a phaeton, when the horse took fright and ran away; and, all attempts to pull him in, being unsuccessful, the phaeton was at last violently dashed against a wall, and Mr. H. was thrown out, sustaining a severe concussion of the brain. On recovering, he found that he had forgotten the immediate antecedents of the accident, the last thing he remembered being that he had met an acquaintance on the road about two miles from the scene of it. Of the efforts he had made, and the terror of his wife and child, he has not, to this day, any recollection whatever.

Anterograde amnesia may be partial or complete. The amnesic condition following attacks of epileptic seizures, whether convulsions accompany them or not, is the best illustration of the anterograde type. Dr. Hammond relates the case of a man subject to epilepsy, in whom the amnesic condition lasted, on one occasion, eight days. During this time he remained away from home, attended theaters and traveled long distances. On regaining consciousness, he remembered nothing of what he had done

during the amnesic condition. Dr. Mills, of Philadelphia, in a clinical lecture, delivered in 1887, gives the histories of three cases of epilepsy, following injuries to the brain, in which occurred periods, lasting from a few minutes to several days, of disturbed consciousness and more or less complete amnesia. One man traveled several hundred miles in a direction he had not intended going, only coming to himself in a strange city a long distance from home.

Dr. Tucker, of Colorado Springs, tells me that he was thrown from his horse a few years ago and rendered, for a brief period, amnesic. He remembers rising to his feet and seeing his horse gallop off, and people running toward him, some of whom he recognized. The next that he remembers was being in his office. He has no personal knowledge as to how he reached his office, but was afterwards informed that he walked there, a distance of several blocks. In this case there was a short period of bewilderment, with a vague memory of what took place, followed by an interval of some length of complete amnesia. Dr. Tucker has given me an account of another case, of which he was cognizant, somewhat similar to his own personal experience, except in the tragical homicide which resulted from it. A gentleman was thrown from his horse, which he remounted and rode some distance after the fall, when on meeting a man whom he had never seen before, he drew his revolver and shot him, causing almost instant death. The last thing that was remembered by this man was being thrown from his horse. He did not know how long he remained on the ground, how he managed to remount, or how far he had ridden after the fall before he shot the stranger. (See these and other interesting cases in an article by the author, in the *ALIENIST AND NEUROLOGIST* for January, 1888.)

It is more common in cases of temporary amnesia resulting from cerebral shock to find that the amnesia extends backwards and forwards from the time of the accident, producing what Charcot has well labeled retro-*anterograde* amnesia.

For example of retroanterograde amnesia, no better can be found than Case I. in this paper, and the one reported by Charcot (*Rev. de Med.*, March, 1892), a brief review of which^{*} is given in the *British Medical Journal* for April 4, 1892:

A woman, aged 34, previously well, suddenly received a (false) report, on August 28, 1891, that her husband was dead. She became delirious with hallucinations, and later lethargic, the whole attack lasting three days. It was then found that she had lost all recollection of events occurring between July 15 and August 28 (a period of retrograde amnesia), although it was ascertained that her memory during that period had been perfect. Events which occurred before July 15, were very clearly and exceptionally well retained. Why the loss of memory should have begun on that date, no sufficient reason can be given, but this is noted also in traumatic amnesia. After the attack she could apparently hardly recollect anything of what was going on around about her, but that events were registered is clear from the fact that they were reproduced in sleep and in the hypnotic state. This condition would thus seem less grave, as it shows only a dynamic loss and not a destructive amnesia. Thus, for instance, the fact that she had been bitten by a dog in October (that is, within the period of anterograde amnesia), was absolutely forgotten in the waking state, but clearly recollected in the hypnotic sleep. Although there was no marked evidence of hysteria, Charcot thinks that the case is of that nature, and that the patient had passed through a delirious phase of that disease into this amnesic state. The long duration, namely, four months, is not astonishing when compared with hysterical vigilambulism. A slow recovery, with the help of suggestion, is to be anticipated. (A note made in 1892—that is, nearly a month later—shows that the patient had already begun to improve).

We have seen that in progressive amnesia the failure of memory follows a regular order, from the less stable to the more stable registrations in the brain, from the psychical or poorly organized memories to the dynamical or highly organized memories, from the complex to the simple acquisitions of mind; and that in the restoration of the faculty of memory, in these cases, the process is in an inverse order to its destruction.

Unfortunately but few of the cases of retroanterograde amnesia have been sufficiently systematically studied at the time of their occurrence to enable us to form any very definite conclusion from an analysis of them. But we shall find from a careful analysis of the various forms of amne-

sia suddenly developed from cerebral shock, that much may be gathered that will aid in differentiating real from feigned amnesia.

In the stage of returning consciousness from the amnesic period of epileptic seizures, especially when there has been no convulsion, it seems to me that we ought to have a more or less fruitful field from which to glean knowledge relative to the method in which consciousness returns after it has been suddenly obscured or obliterated from cerebral disturbance of any kind. It is a matter much to be lamented, however, that the amnesia of epilepsy has apparently never been studied with this object in view. Patients have told me that everything seemed indistinct to them on their first regaining consciousness after an epileptic seizure, in which no convulsion occurred, but I have failed to inquire in what order consciousness has returned.

A case is reported by Dr. J. Mortimer Granville in the journal *Brain*, for October, 1879, and quoted also by Ribot, in which the method of return of consciousness is studied, but less in detail than what is desirable.

A young woman, aged 26, hysterical and choreic, who, after a paroxysm of considerable violence, fell into a state verging on suspended animation.

When consciousness began to return, the latest sane ideas, formed previous to the illness, mingled curiously with the new impressions received, as in the case of a person awaking slowly from a dream. When propped up with pillows in bed near a window, so that passers in the street could be seen, the patient described the moving objects as trees walking, and when asked where she saw these things, she replied, "in the other gospel." In short, her mental state was one in which the real and ideal were not separable. Her recollections on recovery and for some time afterwards were indistinct, and, in regard to a large class of common topics which must have formed the staple material of thought up to the period of the attack, memory was a blank. Special subjects of thought (religion, etc.), immediately anterior to the malady, seemed to have saturated the mind so completely that the early impressions received after recovery were imbued with them, while the cerebral record of penultimate brain-work in the life before the morbid state was, as it were, obliterated. For example, although this young woman had supported herself by daily duty as a governess, she had no recollection of so simple a matter as the use of a writing implement. When a

pen or pencil were placed in her hand, as it might be thrust between the fingers of a child, the act of grasping it was not excited, even reflexly; the touch or sight of the instrument awoke no association of ideas. The most perfect destruction of brain tissue could not have more completely effaced the constructive effect of education and habit on the cerebral elements. This state lasted some weeks. Recovery of the memory was slow and painful, requiring a process of re-education. (Ribot, "Diseases of Memory").

The records of the case, just quoted, are of more value for our purpose than what at first thought they might seem. It is natural to infer that the memory for the use of instruments employed by us in our daily occupation become stable and ought to be classed as organic. If this be the case, such things ought to be the last to be forgotten of the acquirements learned before the amnesic period, save the impressions of childhood and youth. If we remember, however, that the patient was emotional, hysterical, and probably much given to dwelling on religious subjects prior to her illness, these circumstances would be sufficient to cause a confused memory of religious things to be retained, while the knowledge of the use of a pen or pencil, so laboriously gained by years of toil, might be completely obliterated.

Several cases of amnesia following an acute illness are on record in which a process of re-education has been necessary, and one remarkable feature about some of these is that whilst the re-education for many things simply consisted in friends and neighbors recalling them to the minds of the amnesiacs, yet they seemed to have no recollection of ever having possessed this knowledge before.

In two cases of amnesia quoted by Ribot, from Forbes Winslow, memory gradually returned in one, and the "mind resumed all its wonted vigor and its former wealth of polish and education," after a few months successfully spent in the process of re-education; in the other, in which the amnesia was as complete as in the first, memory suddenly returned after the patient had spent some time in relearning things which he had known

before his illness. In neither of these cases are we informed in what order memory returned.

In a case reported by Dunn, in the *Lancet*, November 15th and 29th, 1845, and quoted by Carpenter and Ribot, a young woman, in an amnesic condition, resulting from a fall in a river by which she was nearly drowned, retained memory of only two things, a love affair with a young man to whom she had been attached and her fall into the river. These two incidents undoubtedly had made strong impressions upon her mind and were retained when all less stable and less organized in the tablets of her memory had been obliterated by the shock to the brain, resulting from the fall into the river and the illness that followed it.

About the only thing of importance to be gained relative to our present subject (the diagnosis of feigned from real amnesia) by a study of the recorded cases of periodic amnesia is, that many persons so affected, in their abnormal condition, retain perfect memory for certain stable or organized cerebral impressions, whilst the less stable, more complex and imperfectly organized brain impressions are lost to a greater or less extent.

There is only one case of suddenly developed amnesia recorded, so far as my reading goes, in which restoration of memory followed the law that we found to hold good in progressive amnesia. This is one of temporary retroanterograde amnesia, resulting from injury to the brain, probably cerebral concussion. It is so important that I shall give it in full as quoted by Ribot from M. Kompfen's report in the "*Mémoires de l'Académie de Médecine*," 1835, C. 4, page 489.

I must first give a few details, apparently insignificant of themselves, but worth knowing since they relate to a remarkable phenomenon. During the latter part of November, an officer of my regiment had his left foot injured by the pressure of an ill-fitting boot. On the 30th of November he went to Versailles to meet his brother. He dined there, returning to Paris the same night, and, on entering his lodgings, found a letter from his father on the mantel-piece. We now come to the important point.

On the first of December, this officer was at the riding school, and, his horse falling, he was thrown, striking upon the right side of his body, and particularly upon the right parietal. The shock was followed by a slight syncope. On coming to himself, he remounted "to drive off a little giddiness," and continued his lesson for three-quarters of an hour, with much assiduity. From time to time, however, he kept saying to the riding master, "I have been dreaming. What has happened to me?" He was finally taken home. Living in the same house with the patient, I was immediately called in. He was standing, recognized me and greeted me as usual, saying, "I have been dreaming. What has happened to me?" His speech is natural, he replies readily to all questions and complains only of a confused feeling in the head.

Notwithstanding my inquiries, and those of the riding-master, and of his servant, he remembers neither the injury to his foot, nor his journey to Versailles, nor going out in the morning, nor the orders he gave on going out, nor his fall nor what followed. He recognizes every one, calls each visitor by his name, and knows his position as officer. I have not allowed an hour to pass without examining the patient. Each time that I go back, he believes that I have come for the first time. He remembers nothing of the prescribed remedies administered (foot-bath, rubbing, etc.) In a word, nothing exists for him except the action of the moment.

Six hours after the accident, the pulse begins to rise, and the patient takes cognizance of the reply already made so many times, "You fell from your horse."

Eight hours after the accident, the pulse is still rising. The patient remembers to have seen me once before.

Two hours and a half later, the pulse is normal. The patient no longer forgets what is said to him. He remembers distinctly that injury to his foot. He begins also to recall his visit to Versailles yesterday, but so indistinctly that he says that if anyone were to affirm positively to the contrary, he would be disposed to believe him. However, the memory continuing to return, by night he became firmly convinced that he had been to Versailles. But here the progress of recollection ceased for the day. He went to bed without remembering what he had done at Versailles, how he had returned to Paris, or the receipt of his father's letter.

December second, after a night of tranquil sleep, he remembers on awakening what he did at Versailles, how he came back, and that he found a letter from his father on the mantel-piece. But of all that he saw or heard on the first of December, before his fall, he is still ignorant to-day, that is to say, he has no knowledge of the events in question save from the testimony of others.

This loss of memory is, as the mathematicians say, inversely as the time that has elapsed, between any given incident and the fall, and the return of memory is in a determinate order from the most distant to the most near.

It is probable that with a little more perseverance on our part we may be able to obtain the necessary details of cases of amnesia to throw light on many points in regard to which we are yet in the dark. In Charcot's case nothing is said in regard to the order in which memory has returned. We shall hope, however, that when his patient has completely recovered, to have from the master's hand his usual classical description of the manner in which memory for various events returned.

The patient whose history forms Case I. in this paper, lives at a distance, and I have been unable to obtain a full account from her of her condition since last October or November. At that time her mind was a blank for a period of seventy-one days. As she was emerging from the amnesic state, she remembers seeing a man and a boy, her husband and son, whom she thought were strangers. It was two weeks after she remembers seeing a man and a boy before she was able to recognize them in their proper relations to her.

Now let us return to the case of A., whose history is given at great length in this paper, and see, by comparing his case with those recorded, in which no legal questions arose to complicate them, what conclusions we shall be forced to arrive at in regard to whether his alleged amnesia is feigned or real.

We will first review his case in the light of the sworn testimony and then try to study it, as assisted by his letters to me.

We have a strong, vigorous man, in the prime of life, shrewd and active in business, undergoing great hardships on the plains, and frequently risking his life and that of his family among treacherous and untamed savages, suddenly deprived of an ample fortune by roving and murderous bands of Indians, and left worse than penniless—in debt to the extent of several thousand dollars. Three years are spent in an unaccustomed mode of life in trying to secure from the U. S. Government reparation for his losses. During this period success would seem to crown

his efforts at one time, when something would arise that would necessitate a postponement of the action of Congress for another year. By the end of the third year—worn, weary and anxious, he falls exhausted on one of the streets of Washington, becomes unconscious and has to be taken home. A month of headache, despondency and dark apprehension follows.

The Government pays half his claim, and with the money he settles with his creditors, and has several thousand dollars (about thirty) left. A few weeks later he falls on the street, then follow a year and several months during which he suffers from agonizing headache, great stomach distress, falls on the streets once or twice and becomes unconscious, is confined to his bed three months at one time after an unconscious attack, becomes extremely emaciated, so that his weight is reduced from two hundred and forty to ninety-five pounds, all memory for recent events has fled and he lives in the past as one who is demented. He becomes depressed, apprehensive, sleepless and at times the subject of delusions. He fears to be left alone; child-like, he requires someone to hold his hand while he gets to sleep, and walks in the middle of the streets lest the houses should fall on him. A period of nine years is spent in California, where he becomes capable of attending to some business, but is still apprehensive, despondent and a sufferer from headache and great gastric distress. His memory remains poor and the subjects of his conversation with his friends are his sufferings, Indian encounters, occurrences of his early life and his lock business, of which he is said at times to have become quite visionary. In 1880 he reaches Colorado, still an invalid, the subject of poor memory and incapable of carrying on the smallest business. In New Mexico, in the latter part of 1880 he begins to improve, but is still unable to attend to the slightest details in business. His memory still remains poor. In 1883 he sues a man and gives details of a transaction that occurred in 1866 and the contents of letters concerning this matter

received in 1867, 8, 9. His physical and mental condition improves, but he is still forgetful, gives orders to have work done in a certain way one day and the next day declares that he had never given such orders. This habit becomes so annoying that persons doing work for him refused to carry out any orders that he gave unless they were written or signed by himself. He tells the same man the story of his father's death three times in one day. From 1867 to 1886 or 1887, he was never known to speak of any transaction with Eastman or of land having being deeded in trust to a third party for him. About this time (1886 or 1887), he accidentally meets Eastman, has a faint recollection of having seen him before; and readily remembers him when his connection with a certain firm in Denver was recalled. A. had known Eastman for some time prior to the fall of 1866. The meeting of Eastman does not recall to the mind of A. the faintest recollection of the land transaction. Eastman asks him what he did with the land deeded to a certain party in trust for him? and still he does not remember anything about the land now in dispute, and it was only after Eastman detailed the fact that he (Eastman) had bought of A. one hundred cows, and had paid for them in land which had been deeded in trust to a third party for A., that the latter could remember the transaction. After this he is hesitating, vacillating, easily discouraged and has a poor memory.

From a study of the symptoms presented by A. during the first year or two of his illness, it seems to me that we are justified in making a diagnosis of exhaustion from worry, over-work and exposure to heat, followed by a probable cerebral pachymeningitis, certainly neurasthenia gravis, with the symptoms that usually marks its course, viz., headache, gastric disorder, melancholia and sometimes a state bordering on dementia.

A. claims to remember nothing from the time he fell in front of the Smithsonian Institute, in Washington, in the late spring of 1870, until he found himself in

Sacramento, California, in the fall of 1871, a period of fifteen to eighteen months.

We know from a study of other cases of amnesia, especially that of the progressive form, that complete amnesia, if it does occur, is found surrounding the period of greatest brain disturbance. This is almost the universal rule, and has, so far as I am able to ascertain, only one exception, but this case, reported by Brown-Séquard when studied in the light of the pathology of cerebral hemorrhage, is more apparent than real. We may accept it as a fact that the period of complete amnesia in A.'s case corresponds with the time of its occurrence in other similar cases. No transaction occurred during this period which the plaintiff in the case has any object to forget. The most important period for him to have feigned total amnesia is from 1880 to 1890, the time during which he claims his memory was best. Further, to exclude the supposition of feigning on the part of A., I may state that his attorneys supposed him to be suffering from dementia, when they consulted me about his condition. They were surprised when I told them that it was not dementia, as ordinarily understood, but a form of insanity known as amnesia.

From 1866 to 1870, the period of partial amnesia preceding the total amnesia, he claims to remember buying the large herd of cattle in Texas, with which he intended to fill his Government contract; the Indians attacking him in 1867 and the narrow escape of himself and family from being massacred; the news of the loss of his entire herd of cattle and outfit, which represented more than his own possessions; pressing his claims in Washington and the various details of the same; the payment by the U. S. Government to him of \$73,000; paying his debts, and removing his family to Washington, but he does not know whether he remembers these things of himself or whether he has been assisted by his family, as all these events were well known to his family, and have been frequently the subject of conversation by them in his presence.

During this period he claims to have forgotten everything of which his family were not cognizant, such as the land transaction now in dispute, a party owing him \$12,000, and others owing him sums amounting to \$25,000. One thing seems certain that A. was never heard to speak of the transactions until during the last three or four years, when he met parties who were familiar with the facts, or found records to recall the transactions to his mind.

If Mr. A. was learned in psychological research, he could not have more accurately detailed facts that accord with what we know of retrograde amnesia than he has done in his letters to me; yet he did this unconscious of my object, further than testing his memory.

Of this amnesic period, Ribot says:

The physiological cause of amnesia in this group is only amenable to hypothesis; and probably it varies with each case. At first, the faculty of registering new impressions is temporarily suspended; as they appear, states of consciousness vanish and leave no trace. But preceding recollections, registered for weeks, months, years—where are they? They have long endured, they have been conserved and frequently reproduced, they seemed to be a stable acquisition, and yet their place is a blank. The patient is able to gain them only indirectly and by artifice—the testimony of others or his personal reflections which unite the present in a more or less imperfect fashion with what remains of the past. Observation does not show that this chasm is ever bridged by direct recollection.

The testimony of all the witnesses for the plaintiff and defense, including every member of Mr. A's family, is, to the effect that he was never known to speak of the transactions which he claims to have forgotten. When we take into consideration that this period of silence is twenty years in duration, during which time he was frequently in want, and much distressed to secure the necessary comforts of life, it seems to me that we have sufficient proof of the genuineness of his claim to inability to remember, unassisted, the events of this period of his life.

I may be asked, why he seems to have such a vivid

recollection of his sensations preceding his second attack in Washington? His account of what occurred just immediately preceding his fall is:

I felt a very tired sensation, as though I was carrying a heavy load and started to go home, got as far as the gate of the Smithsonian Institute and then the rest is a blank for a long time.

This attack must have been somewhat in the nature of epilepsy. It is well known that epileptics will describe their sensations preceding their first convulsion, if any were present, ten or twenty years after their occurrence. It may be thought that because they have given a detailed description of them so often that they become firmly impressed upon the mind. I grant this is so. In A.'s case, a detailed description of his troubles has been gone over from the time his mind became first affected. It is well known that in some forms of epilepsy that persons may retain a vague memory of their feelings during most of the seizure, if it is unattended with convulsions, but forget the objects of the errands on which they were engaged at the time of the occurrence of the attack.

Let us take A.'s own account of how the power of memory seemed to return, and see if it accords with the usual manner in which memory returns in similar cases. He remembers being in California, but not the year he reached there. He remembers being in Sacramento, and doing some work there, but states that it all seems like a dream.

He says that he remembers San Francisco better, and gives as a reason, that his oldest boy died there of scarlet fever. He remembers what terrible sufferings he had from stomach, want of rest and sleep. He states that he remembers that he felt much better some days than on others. In his letter he calls to mind his lock factory, but says of that period, he can remember little else besides his misery.

He is quite sure that after 1886 or 1887 that he could

remember everything that occurred previous to his illness when the events are recalled to his mind.

It is no use to spend time in a further examination of these statements of Mr. A. They are in exact harmony with what takes place in similar cases in which there has been no object in feigning.

It now may be well to consider a few objections that might be raised against accepting A.'s amnesia as real. With all of his eccentricities and lack of memory, he exhibited a certain amount of perseverance and some enthusiasm in connection with his lock business while in California and his conversation, which seems to have been limited to his pet subject (the lock patent), his ailments, the incidents of early life and his encounters with Indians, was connected, and struck the ordinary observer as being intelligent. Some testified that he seemed all right mentally.

I have no doubt that these witnesses testified truthfully. It is well known, however, that a person may have a considerable defect of memory for a certain period of his life, and yet this may never be discovered, even by his physicians, unless a careful inquiry is gone into covering the period over which the amnesia extends. None of the witnesses that testified on the side of the defense were physicians, and not a single witness had inquired into the condition of his memory. At first thought it may seem to some that a certain amount of business capacity and the exhibition of considerable intelligence in carrying out schemes in connection with a patent, militate against accepting his amnesia as real. But it only requires a little reflection to see that this has nothing to do with the period of amnesia.

There are numerous well-authenticated cases on record of intelligent persons losing, on account of cerebral shock or brain disturbance of some kind, all memory for a certain period of their lives, and although this period has never been bridged over, either directly or indirectly, yet they have exhibited the same vigor of mind and the

same wealth of polish and culture that they had shown previous to the amnesia period.

A.'s semi-demented condition, extending over a period of fifteen or eighteen months, and his subsequent poor mental and physical condition have been carefully inquired into in this paper, not to prove the condition of amnesia from these facts, but to show that the power of memory with him returned very much in the same manner as we find it does in the resolution period of dementia. This being shown, it proves that he is not feigning.

The objections raised by the attorneys for the defense to A.'s alleged loss of memory on account of the accurate memory he showed in 1883, concerning a loan made in 1866 and certain subsequent circumstances connected with this loan, are answered at sufficient length in giving the history of this period of his life. No chasm was ever discovered here, because the wife was in the possession of the connecting link that bound the past to the present in relation to this transaction.

So much has been said in A.'s history, both as given by himself and as testified to by nearly all the witnesses for the plaintiff and defense, concerning his memory, of his depression of spirits, sufferings and hardships, endured both before and subsequent to his acute illness, that it may not be out of place to quote from Ribot in reference to the emotions and feelings :

The most careful observers have remarked that the emotional faculties are effaced much more slowly than the intellectual faculties. At first thought it seems strange that states so vague as those pertaining to the feelings should be more stable than ideas and intellectual states in general. Reflection will show that the feelings are the most profound, the most common and the most tenacious of all mental activity. While knowledge is acquired and objective, feelings are innate. Primarily considered, independently of any subtle or complex forms which they may assume, they are the immediate and permanent expression of organic life. The viscera, the muscles, the bones—all the essential elements of the body—contribute something to their formation. Feelings form the self; amnesia of the feelings is the destruction of the self.

From a study of the cases of amnesia that I have

reported in this paper and from an analysis of numerous records of similar cases it seems to be that the following conclusions are warranted:

1. In cases of sudden loss of memory (complete for a certain period), if memory for anything thus lost ever returns spontaneously, the events that were the most firmly impressed upon the mind at the time of their occurrence would be the most likely to be recalled (*e. g.*, things taking place under great hardships and* trying or exciting circumstances); but the routine events of life, unattended by extraordinary circumstances would be likely not to return at all spontaneously if the disturbance to the brain had been very great. These would require a recalling by someone, or by a combination of circumstances, before they could be appreciated by the blurred consciousness.

2. This rule seems to have exceptions, but they are less numerous than at first thought they appear, when we take into consideration all the modifying circumstances connected with mental impressions.

3. In amnesia from brain disturbance of any kind, if there is a period in which it is complete and cannot be bridged over by any means, it apparently is most likely to occur at the time when the cerebral nutrition is the poorest and consciousness begins to return when the health begins to improve.

4. Continued poor health retards or prevents return of memory.

5. Personal feelings and emotional states are more stable in memory than the results of the intellectual faculties.

6. Bright and intelligent persons, who are recognized by all who know them as sane, may have chasms in their past consciousness, which never have been and never can be bridged over.

7. Such a condition of amnesia may never be detected by the most intimate acquaintance, unless inquiry is made into the memory for this period.

